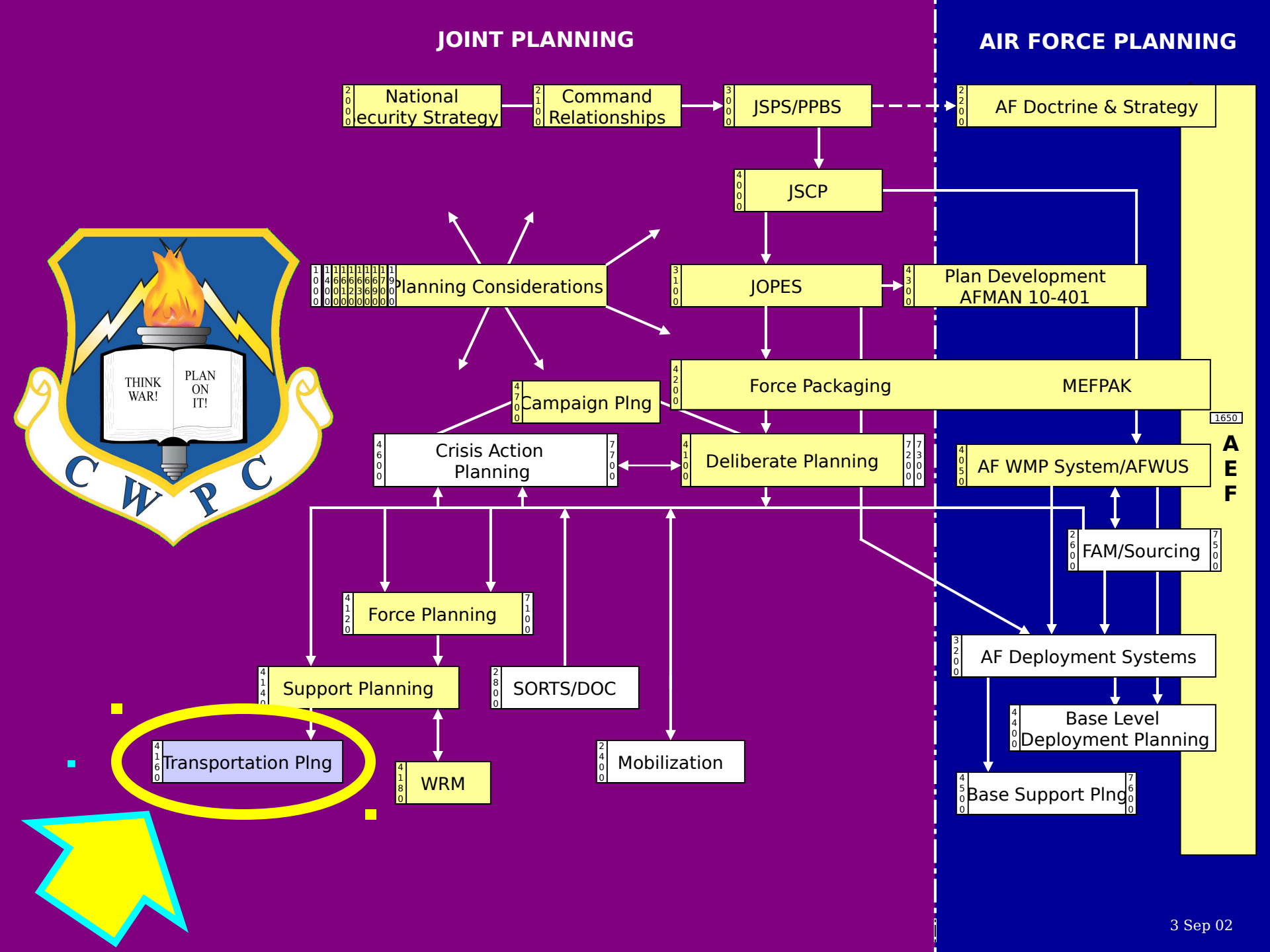
Transportation Planning

IP-4160


JOINT PLANNING
AIR FORCE PLANNING
2000 National ecurity Strategy
2100 Command Relationships
3000 JSPS/PPBS
2200 AF Doctrine & Strategy
4000 JSCP
1000 1146600012 1166623600 1167900 Planning Considerations
3100 JOPES
4300 Plan Development AFMAN 10-401
4200 Force Packaging MEFPAK
4700 Campaign Plng
1650
AEF
4600 Crisis Action Planning 7700
4100 Deliberate Planning 7200 7300
4050 AF WMP System/AFWUS
2600 FAM/Sourcing 7500
4120 Force Planning 7100
3200 AF Deployment Systems
4140 Support Planning
2800 SORTS/DOC
4400 Base Level Deployment Planning
4160 Transportation Plng
4180 WRM
2400 Mobilization
4500 Base Support Plng 7600
THINK WAR!
PLAN ON IT!
C W P C
3 Sep 02

Overview

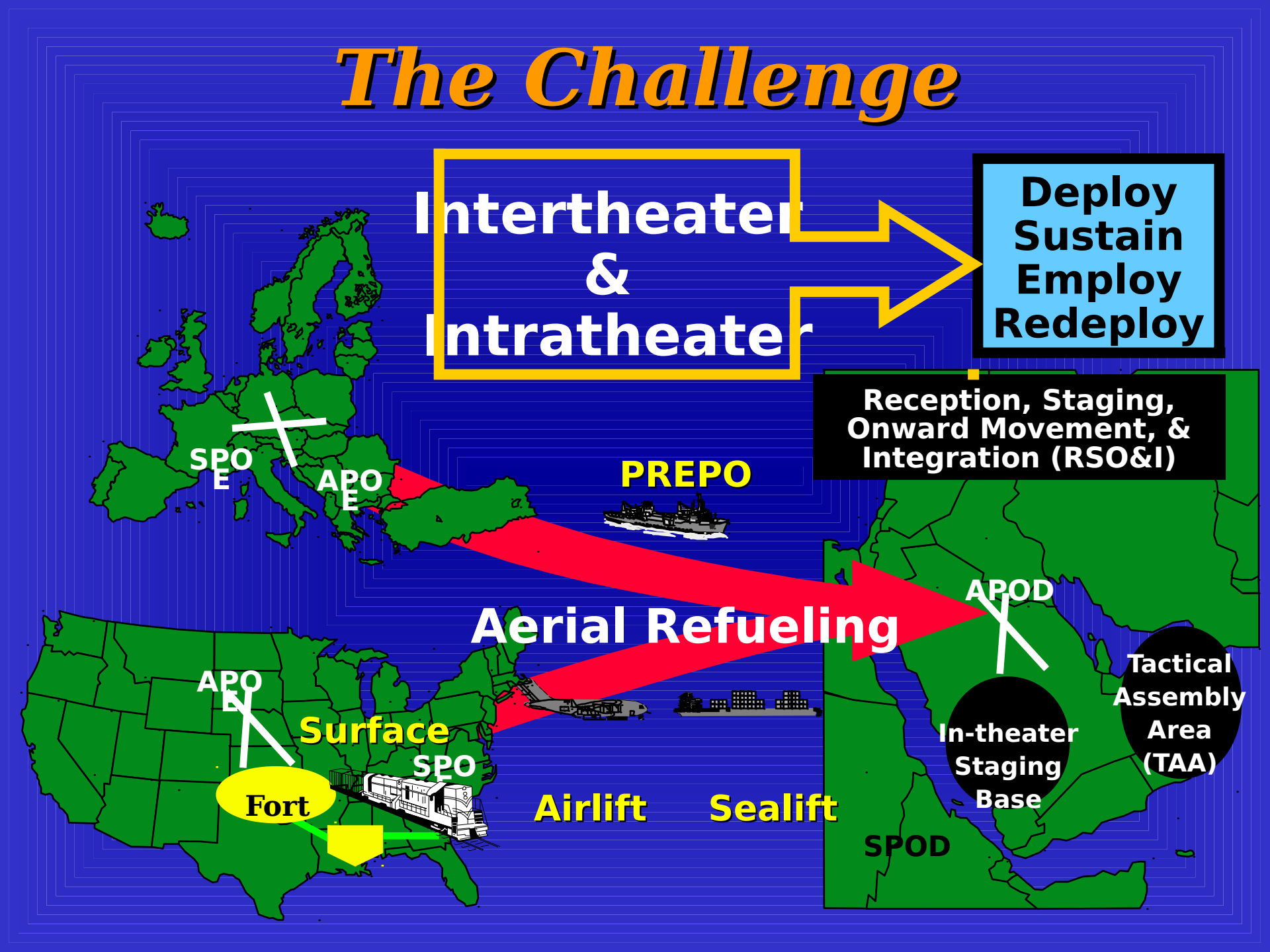
- Objectives and Terms
- Transportation Planning
- Transportation Systems
- TPFDD Letters of Instruction
- TPFDD Validation Process
- USTRANSCOM Mission and Transportation Component Commands (TCCs)
- Transportation and Deployment Operations Phases

- <u>Primary References:</u>
  - JOPES Volumes I and III
  - DoD 4500.9 Defense Transportation Regulation
  - Joint Pub 4-01.8, Joint Tactics, Techniques, and Procedures for Reception, Staging, Onward Movement, and Integration
  - Joint Pub 3-35, Joint Deployment and Redeployment Operations
  - AFI 20-200 series

Transportation Planning Objectives:

- Project combat capability
- Optimize usage of transportation resources
- Consider various modes and sources of lift
- Develop transportationally feasible TPFDDs during deliberate planning for modification/usage during crisis

The Challenge



Terms
Categories of Lift

- Intertheater lift
  - Between theaters
  - USTRANSCOM owned
  - CONUS to Overseas, Overseas to Overseas
  - Strategic Lift: C-5, C-17, C-141, Contract Airlift, Ship
  - Objective: project combat capability

- Intratheater lift
  - Within a theater / Area of Operations
  - Theater Combatant Commander owned
  - Tactical Lift: C-130, C-17, Contract Airlift, Truck, Bus, Rail, Boat

- Surface Lift moves materiel by land haul or ship

Terms
TPFDD Analysis

- Joint Flow and Analysis System for Transportation (JFAST)
  - Analyzes a TPFDD to determine its feasibility according to strategic lift usage, port handling, and various other factors
  - Identifies shortfalls, limiting factors, and other problems which must be corrected in the TPFDD
  - Assists in selecting a Course of Action

Terms
Maximum On Ground (MOG)

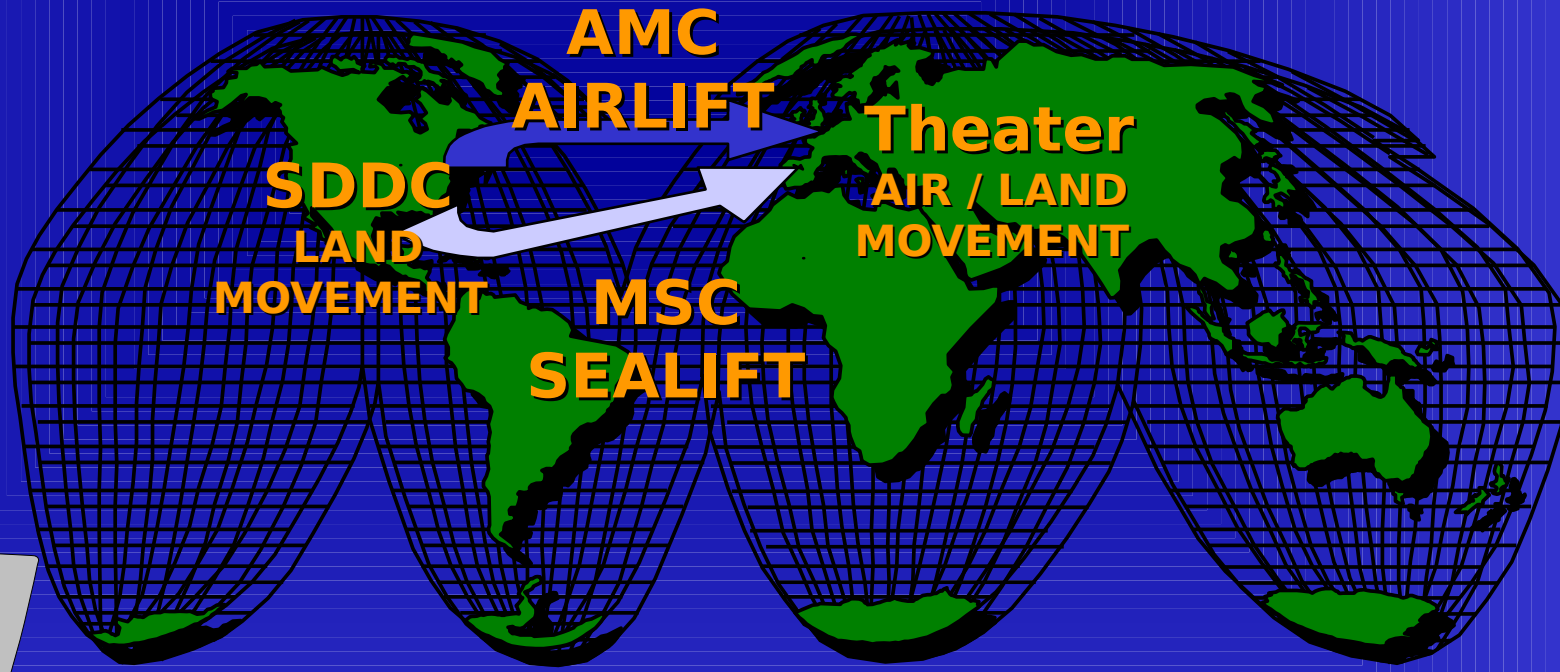
- Parking MOG

vs.

- Working MOG

Planning

- Planning Responsibilities
- Deliberate Planning
- Crisis Action Planning



Supported Commander Planning Responsibilities

- Develop a transportationally feasible TPFDD, including TPFDD Letter of Instruction

- Coordinate with TRANSCOM for TPFDD:
  - Prioritization of forces
  - Required Delivery Dates
  - Mode and source of lift
  - Movement Flow
  - Shortfalls / LIMFACs

USTRANSCOM Planning Responsibilities

- Develop and operate JOPES applications
- Receive, evaluate, task, coordinate global mobility requirements supporting unified Combatant Commanders
- Direct deployment execution and redirect transportation to meet President and SECDEF / Combatant Commander taskings
- Optimize usage of transportation capability

Deliberate Planning

- Phase I - Initiation
- Phase II - Concept Development
- Phase III - Plan Development
- Phase IV - Plan Review
- Phase V - Supporting Plans

Phase I:

- Combatant Commander receives CJCS planning task & guidance
- Major Forces and Strategic Lift Assets available for planning apportioned

Deliberate Planning

- Phase I - Initiation
- Phase II - Concept Development
- Phase III - Plan Development
- Phase IV - Plan Review
- Phase V - Supporting Plans

Phase III products:

- Completed plan w/ or w/o TPFDD
- TPFDD including TPFDD LOI

Deliberate Planning

DELIBERATE PLANNING PHASES

Initiation	Concept Develop	Plan Develop	Plan Review	Supporting Plans

Transportation Planning STEPS 4-7

STEP 1
FORCE PLANNIN

STEP
SUPPORT PLANNING

STEP 3
NUCLEAR PLANNIN

STEP 4
TRANSP PLANNING

STEP 5
ID SHORTFALL
IMFACS

STEP 6
TRANS FEASIBILITY

STEP 7
TPFDD REFINEMENT

STEP 8
PLAN DOCUMENTA-TION

Deliberate Planning Phase III

JFAST

STEP 5

SHORTFALL IDENTIFICATION

WILL FORCES ARRIVE ON TIME?

CAN SUPPORT BE FURNISHED?

ARE LIFT ASSETS SUFFICIENT?

WORKING TPFDD

STEP 4
TRANSPORTATION PLANNING

TPFDD
Combat Forces
Support Forces

STRATEGIC LIFT ASSETS

STEP 6

TRANSPORTATION FEASIBILITY ANALYSIS

IS OPLAN GROSSLY FEASIBLE?

NO

YES

ADJUST TPFDD

STEP 7: TPFDD REFINEMENT

- JFAST IS RUN AGAIN AFTER ACTUAL UNITS AND SUPPLIES
- "EFFECTIVE FOR PLANNING" MAINTAINED IN JOPES DATABASE

Transportation Planning A Repetitive Process

Deliberate Planning Phase III

- STEP 4: TRANSPORTATION PLANNING
  - Supported Commander determines Initial Transportation Feasibility
  - Initial (and continuing) personnel / materiel transportation planning considerations:
    - Select mode and source of strategic lift
    - POE / POD personnel processing, MHE, materiel storage capabilities
    - Theater lift between POD and destinations, for all services
      - Hub and Spoke
      - Round Robin
    - Sustainment personnel / materiel
  - Step 4 Planning Objective: RESOLVE GROSS FEASIBILITY QUESTIONS

Deliberate Planning Phase III

Intertheater Lift Comparison

- AIRLIFT
  - Very Fast
  - Very Flexible
  - Limited Capacity
  - Most Expensive
  - Possibly Origin=POE and/or POD=Destination
  - Airfield Dependent
  - Requires special materiel handling equipment for CRAF, KC-10s, commercial
- SEALIFT
  - Slow to very slow
  - Some flexibility
  - Huge capacity (1 ship = 130 C-5s)
  - Least expensive
  - Seaport-dependent
  - Requires special offloading equipment for civilian ships
  - Need robust intratheater lift
  - Need large port staging area

Deliberate Planning Phase III

- STEP 5: SHORTFALL IDENTIFICATION
  - From JFAST computer-simulated movement, identify:
    - Late arrivals of personnel and/or cargo
    - Shortages of strategic lift or intratheater lift requirements
    - Overloaded port or support facilities
    - Poor routing due to threats or treaties
    - Any other factors affecting deployment ops
  - Planners make reasonable corrections or adjustments
    - ID unresolved shortfalls
  - Combatant Commander notifies JCS of serious Shortfalls / LIMFACs

Deliberate Planning Phase III

- STEP 6: TRANSPORTATION FEASIBILITY ANALYSIS
  - Strat lift formally analyzed in this step
  - Continuous throughout process to identify / resolve shortfalls / LIMFACS
  - Run several iterations of JFAST
- Result:
  - Plan is transportationally feasible
  - Ready for TPFDD refinement by supporting commands / agencies , USTRANSCOM

Deliberate Planning Phase III

- STEP 7: TPFDD REFINEMENT CONFERENCES
  - FORCES REFINEMENT
    - Hosted by: USTRANSCOM
    - Services source and tailor Major Combat Forces, Combat Service, Combat Service Support Forces
    - Adjust requirements for prepositioned materiel or shortfalls
  - LOGISTICS REFINEMENT
    - Hosted by: Service Logistics Sourcing Agencies, Defense Logistics Agency, Components
    - Participants ID quantities of supplies, equipment, replacement personnel to sustain selected forces

Deliberate Planning Phase III

- STEP 7: TPFDD REFINEMENT CONFERENCES
  - <u>TRANSPORTATION REFINEMENT</u>
    - Hosted by: USTRANSCOM
    - Supported CC gives a sourced TPFDD to USTRANSCOM
    - Resolve transportation-related problems
    - Determine TPFDD
      - Still Transportationally Feasible
      - Meets Combatant Commander approved concept of ops, JSCP, CJCS guidance
    - Supported CC, in coord w/ JCS and TRANSCOM, publishes refinement guidance in TPFDD LOI
  - <u>Results:</u> TPFDD “EFFECTIVE FOR PLANNING”, and "Transportationally Feasible Plan"

Deliberate Planning Phase III

JFAST

STEP 5

SHORTFALL IDENTIFICATION

WILL FORCES ARRIVE ON TIME?

CAN SUPPORT BE FURNISHED?

ARE LIFT ASSETS SUFFICIENT?

WORKING TPFDD

STEP 6

TRANSPORTATION FEASIBILITY ANALYSIS

IS OPLAN GROSSLY FEASIBLE?

YES

NO

ADJUST TPFDD

STEP 4 TRANSPORTATION PLANNING

TPFDD
- Forces
- Support

STRATEGIC LIFT ASSETS

STEP 7: TPFDD REFINEMENT

- JFAST IS RUN AGAIN AFTER ACTUAL UNITS AND SUPPLIES
- “EFFECTIVE FOR PLANNING" MAINTAINED IN JOPES DATABASE

Deliberate Planning

Initiation	Concept Develop	Plan Develop	Plan Review	Supporting Plans

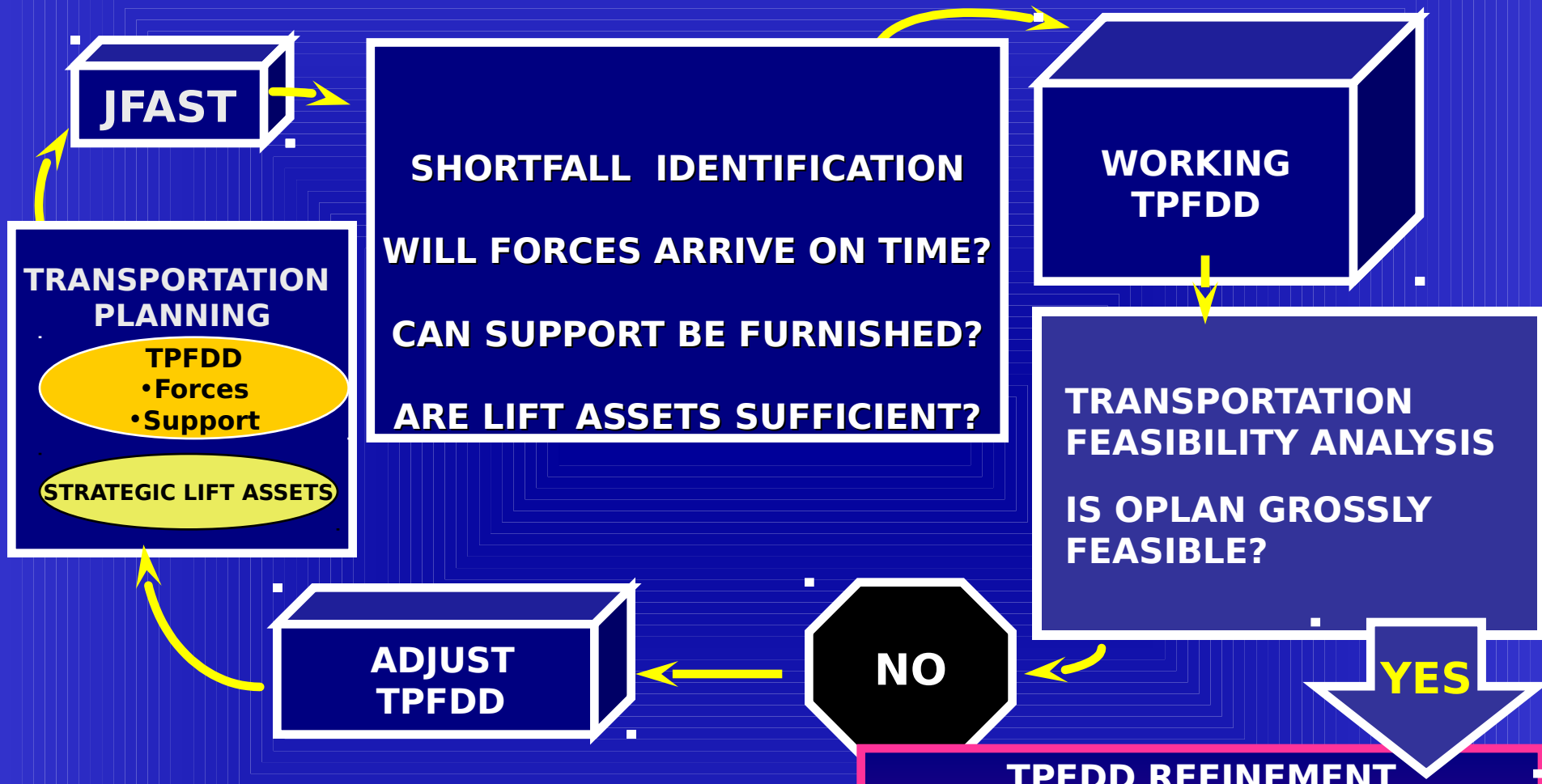
- Phase III Plan Development Steps
  1. Force Planning
  2. Support Planning
  3. Nuclear Planning
  4. Transportation Planning
  5. ID Shortfalls/LIMFACS
  6. Transportation Feasibility
  7. TPFDD Refinement
  8. Plan Documentation

Transportation Planning: STEPS 4-7

Phase III products:

- Completed plan w/ or w/o TPFDD
- TPFDD including TPFDD LOI

Crisis Action Planning



Crisis Action Planning

- Phase I - Situation Development
  - Supported Commander
    - Forces, options available
    - Which OPLAN / CONPLAN to work from
  - USTRANSCOM monitors developing crisis
- Phase III - Course of Action Development
  - Supported Commander
    - Develops TPFDD (OPLAN / CONPLAN)
  - USTRANSCOM
    - Activates Crisis Action Team (CAT)
    - Assists in Refining Requirements
    - Prepares deployment estimate for each COA; sends to Supported Commander via JC2

Crisis Action Planning

- Phase V - Execution Planning
  - Supported Commander
    - Finalizes TPFDD
    - Publishes TPFDD Letter of Instruction (LOI) - JOPES Vol 1:
  - USTRANSCOM
    - Ensures adequate lift available
    - Develops feasible transportation schedules
    - Coordinates changes caused by conflicts / shortfalls
- Catch: Must have fully SOURCED TPFDD to run JFAST

Transportation Systems

Transportation Planning Systems

- DCAPES
  - AF JOPES Editing Tool (JET) - TPFDD editor
  - AF System which enforces AF planning business rules
  - Helps coordination / communication between planners
  - Shows both Manpower/Personnel and Logistics Detail
  - Update the TPFDD using LOGMOD DSOE and LOGPLAN data imports
  - Real-time update to TPFDD in JOPES
  - GSORTS
  - UTC Registration & Maintenance
    - Includes UTC POC and coordination data and tools
  - Lookup tables for GEOLOC, ICAO, units, PAS codes, FAMs, etc.
  - Forces planning and sourcing
  - Access to GSORTS (and ART via SIPRNET)

Transportation Planning Systems

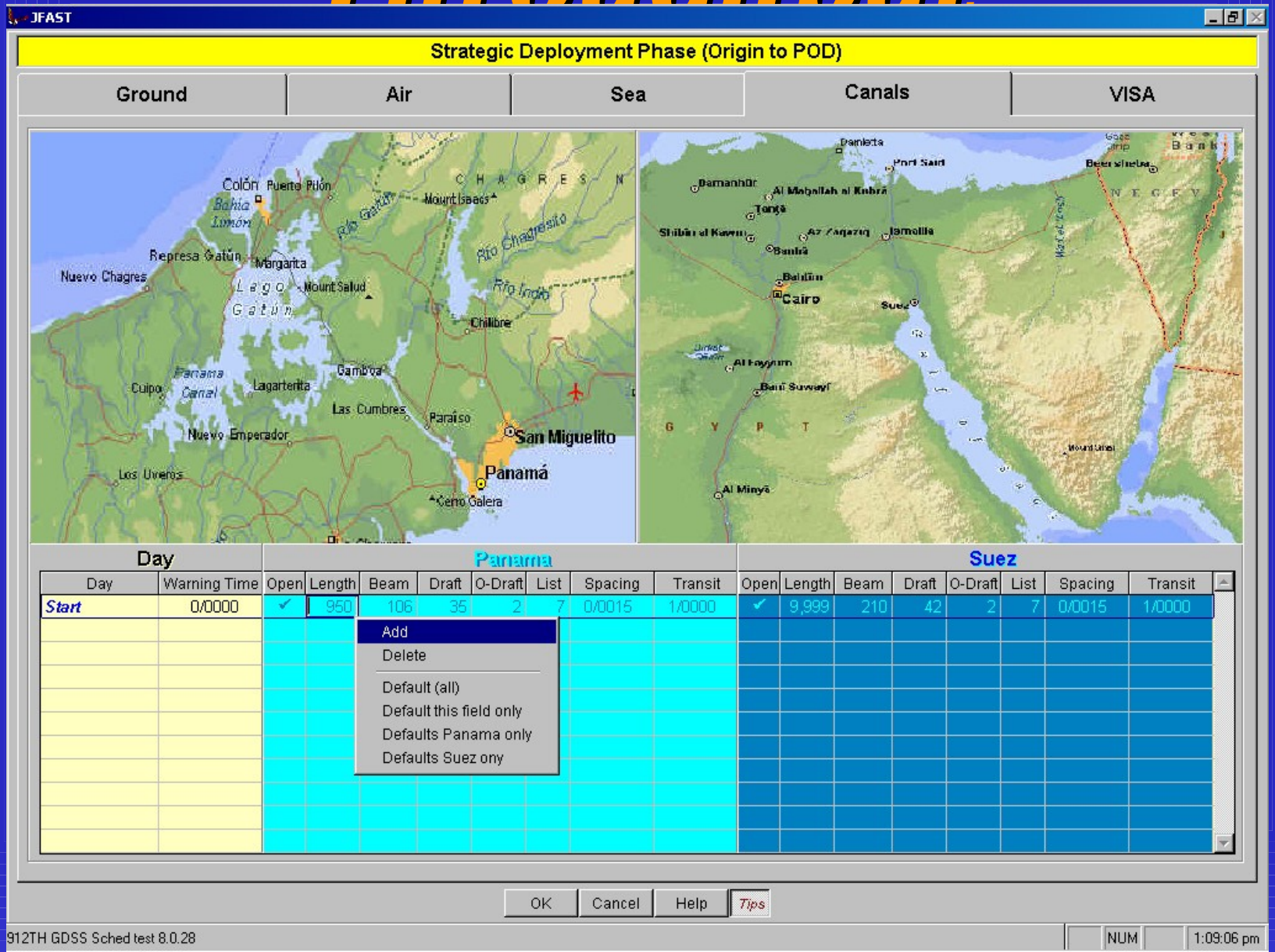
- Global Command and Control System (GCCS)
  - JOPES Editing Tool (JET) - TPFDD editor
  - GSORTS
  - Logistics Sustainment Analysis & Feasibility Estimator (LOGSAFE)
  - Scheduling & Movement
  - Lookup tables for GEOLOC, ICAO, units, etc.
  - Classified email
  - Joint Flow & Analysis System for Transportation (JFAST)

Main Menu
UNCLASSIFIED
UNITED STATES TRANSPORTATION COMMAND
Joint Flow and Analysis System for Transportation
JFAST
Version 6.0
Operating on Drive: C:
Current Plan: X9999
Edit Plan
Plan Save / Restore
Analysis
NRG
Utilities
Quit
Plan Data
Drive C: Local Hard Disk
Reference Data
Drive C: Local Hard Disk
UNCLASSIFIED

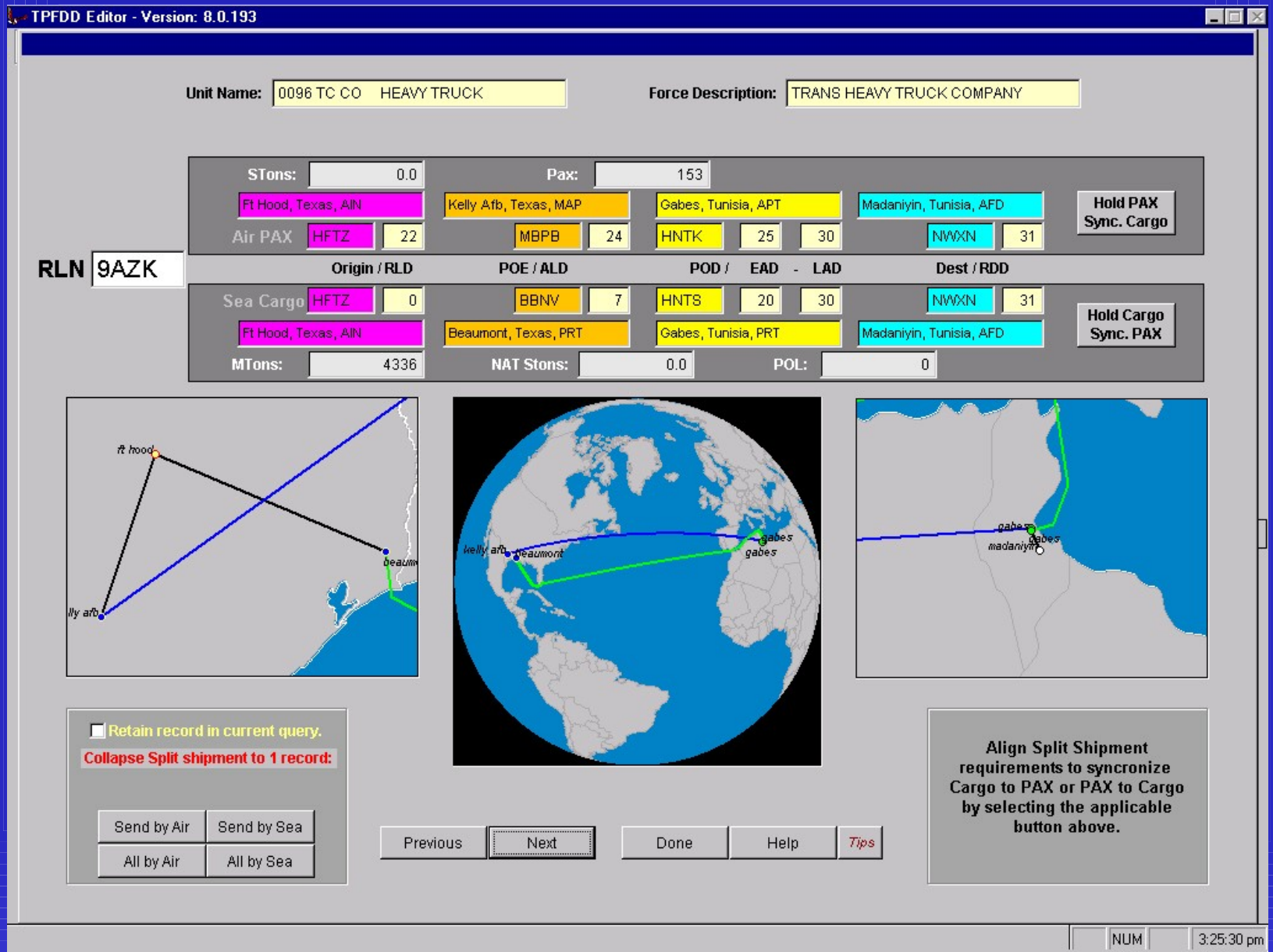
Joint Flow and Analysis System for Transportation (JFAST)

- TPFDD transportation analysis
- Aids COA analysis / selection
- Ties to JET, LOGSAFE
- Unclassified, SECRET, TOP SECRET modes
- Evaluates:
  - Travel and shipping times
  - Port saturation and chokepoints
  - Lift utilization and comparison
- Multiple ways to export TPFDD data, graphics

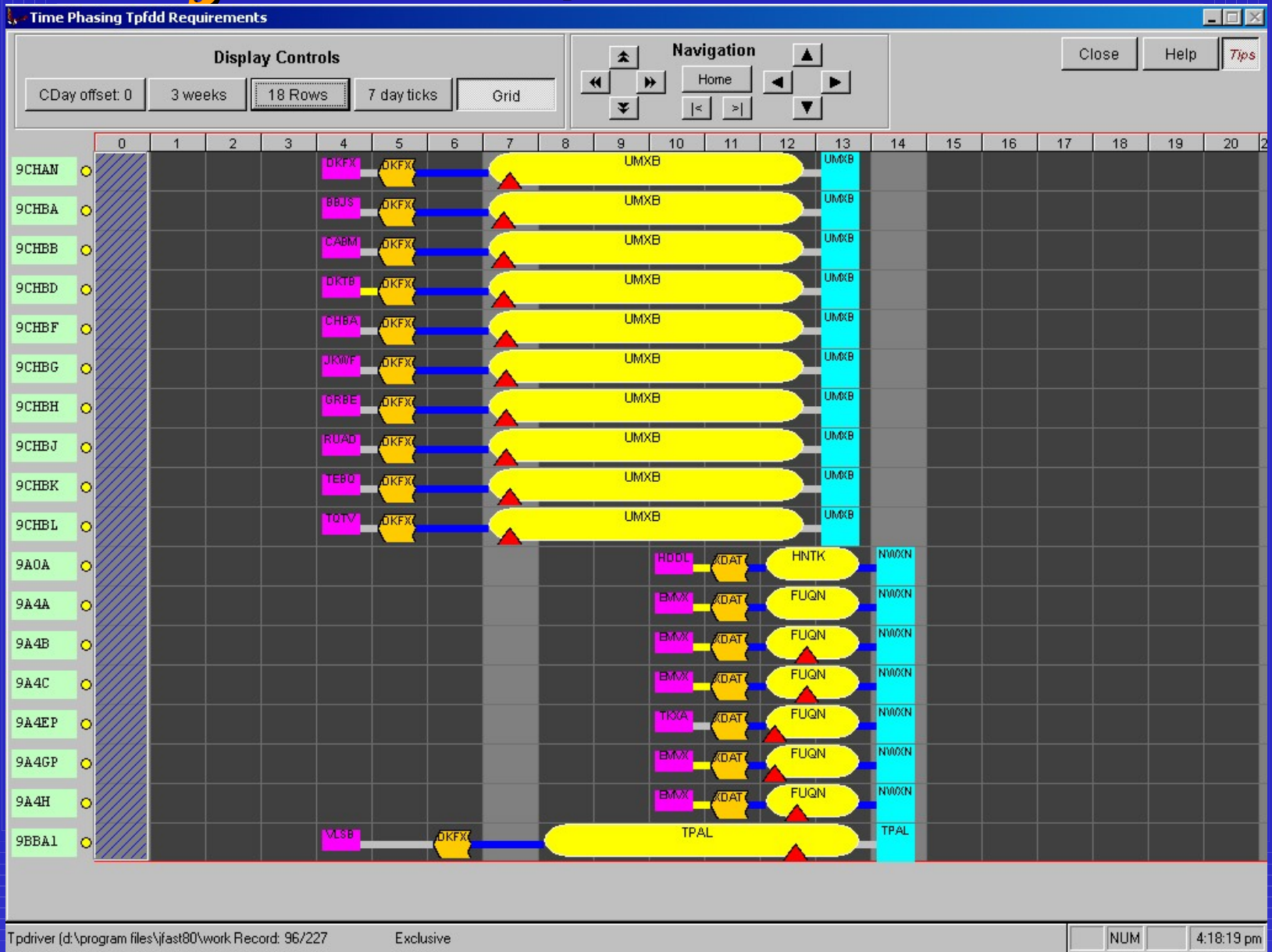
Control Canal Throughput



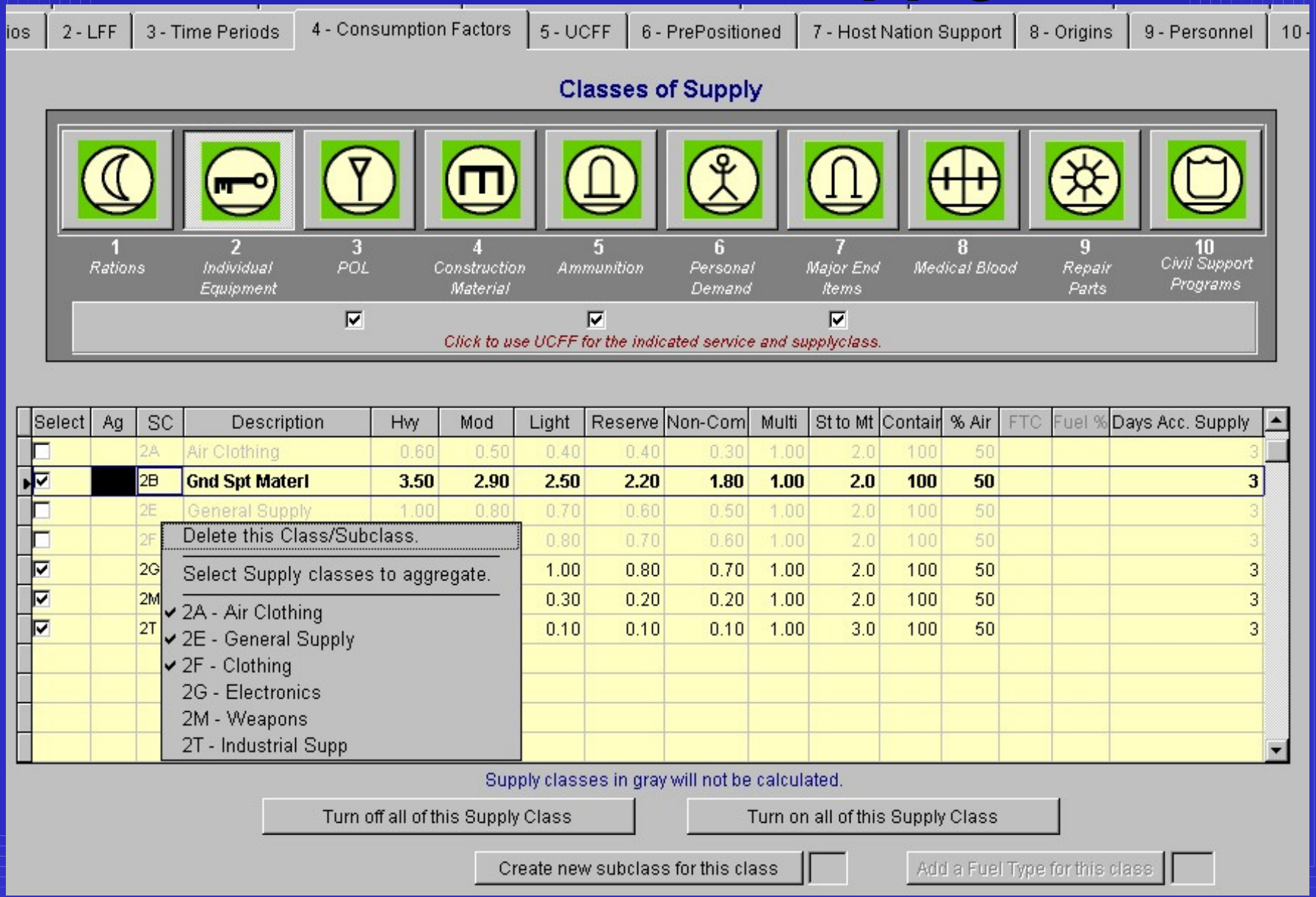
View and Adjust Routing
Set Split Shipments and Frag/Insert ULN Movements



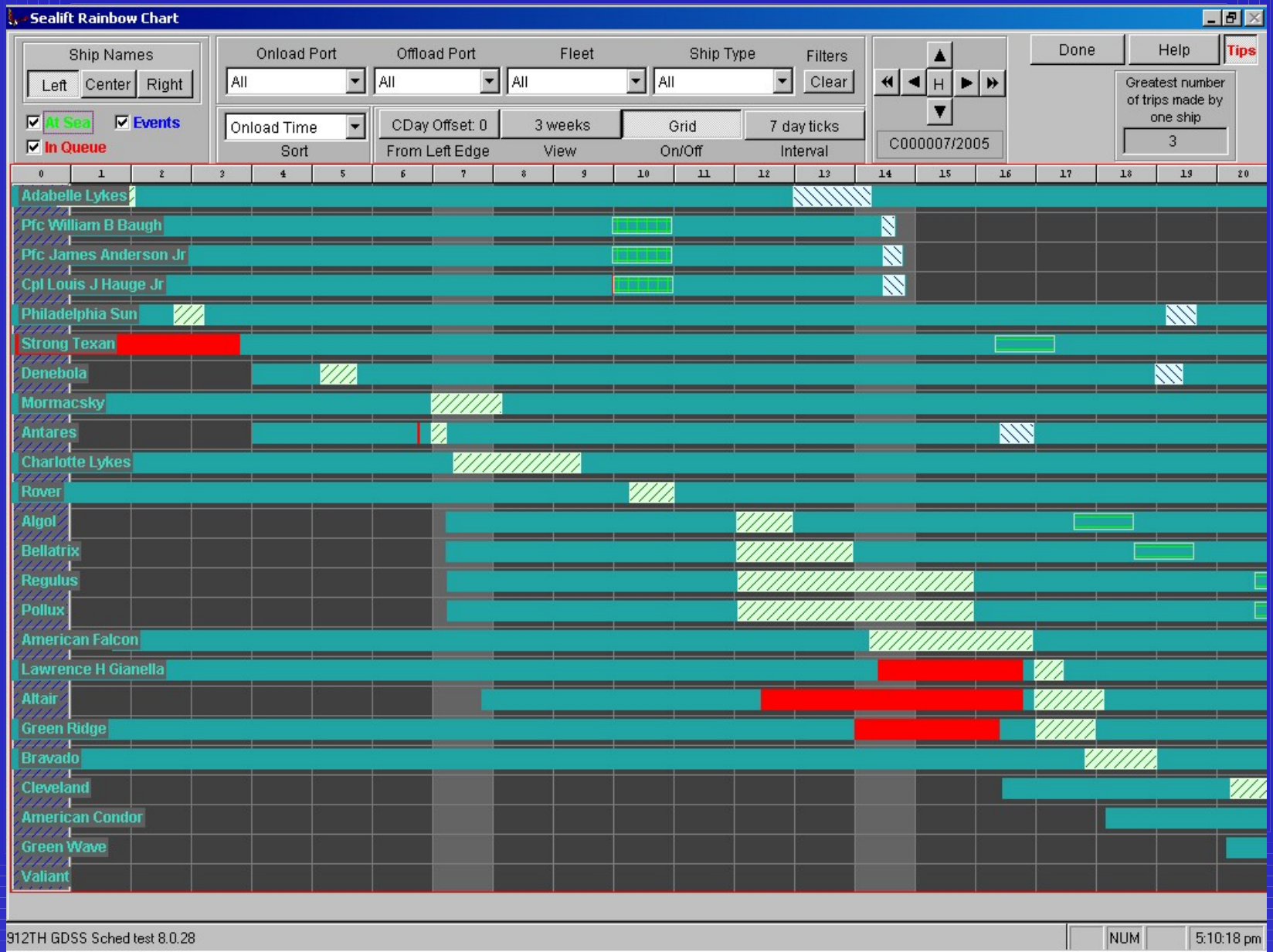
Graphically View ULN Movement / Adjust EAD/LAD Windows



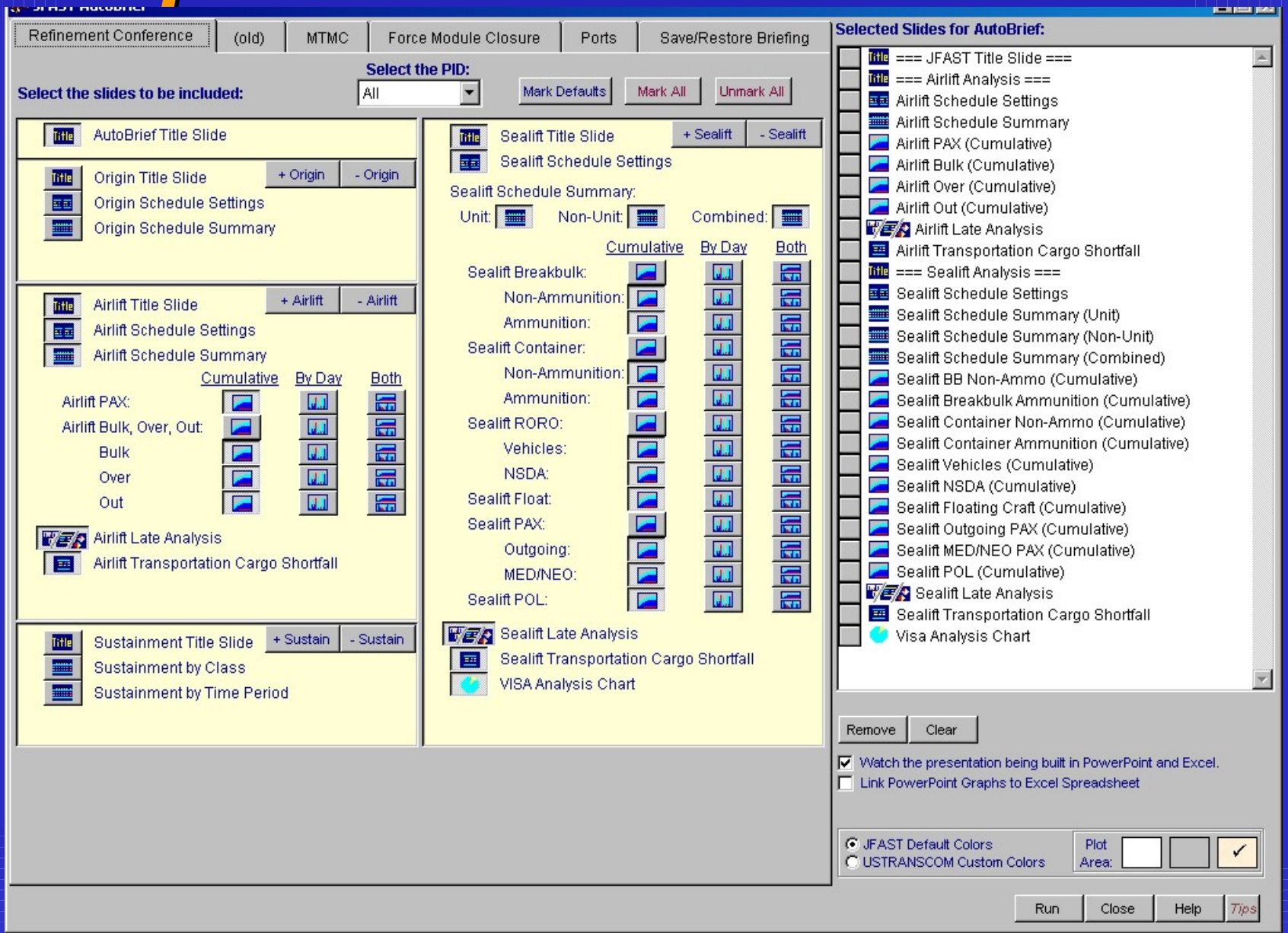
Estimate Sustainment by Classes / Subclasses of Supply


ios
2 - LFF
3 - Time Periods
4 - Consumption Factors
5 - UCFF
6 - PrePositioned
7 - Host Nation Support
8 - Origins
9 - Personnel
10 -
Classes of Supply
1 Rations
2 Individual Equipment
3 POL
4 Construction Material
5 Ammunition
6 Personal Demand
7 Major End Items
8 Medical Blood
9 Repair Parts
10 Civil Support Programs
Click to use UCFF for the indicated service and supplyclass.
Select
Ag
SC
Description
Hwy
Mod
Light
Reserve
Non-Com
Multi
St to Mt
Contain
% Air
FTC
Fuel %
Days Acc. Supply
2A Air Clothing 0.60 0.50 0.40 0.40 0.30 1.00 2.0 100 50 3
2B Gnd Spt Materl 3.50 2.90 2.50 2.20 1.80 1.00 2.0 100 50 3
2E General Supply 1.00 0.80 0.70 0.60 0.50 1.00 2.0 100 50 3
2F 0.80 0.70 0.60 1.00 2.0 100 50 3
2G 1.00 0.80 0.70 1.00 2.0 100 50 3
2M 0.30 0.20 0.20 1.00 2.0 100 50 3
2T 0.10 0.10 0.10 1.00 3.0 100 50 3
Delete this Class/Subclass.
Select Supply classes to aggregate.
2A - Air Clothing
2E - General Supply
2F - Clothing
2G - Electronics
2M - Weapons
2T - Industrial Supp
Supply classes in gray will not be calculated.
Turn off all of this Supply Class
Turn on all of this Supply Class
Create new subclass for this class
Add a Fuel Type for this class

Evaluate Ship Utilization



JFAST Autobuilds a Briefing Complete with Stats and Charts



RUUM

Global Transportation Network (GTN)

Global Transportation Network (GTN)

- Shows:
  - Cargo, personnel location, mission number
  - Pax name, weight
  - Cargo Transportation Control Number (TCN)
  - Reference files for GEOLOC, ICAO, other codes
- Feeds to GTN
  - Cargo Movement Operating System (CMOS), part of IDS
  - Global Air Transportation Execution System (GATES)
- www.gtn.transcom.mil

Transportation Systems

- Global Decision Support System (GDSS)
  - Used by Air Mobility Command to communicate aircraft status, movement, scheduling
- C2IPS - used by command post
- Single Mobility System (SMS)
  - Web-based computer system that provides visibility of air, sea, and land transportation assets
  - Provides aggregated reporting of cargo and passenger movements
  - Collects plane, ship, and truck movement data from other computer systems such as GTN, CAMPS, GDSS, JALIS, DTTS, and ANGMU

Transportation Systems Training

- Joint Deployment Training Center, Ft Eustis
  - JOPES Support Personnel Course
  - JOPES Specialty Course
  - JOPES Action Officer Course
- Air Mobility Warfare Center, Ft Dix
  - GCCS Combined Course
  - Other GCCS Applications Courses

TPFDD Letters of Instruction

Joint TPFDD LOI

- Gives rules and guidance for:
  - TPFDD Development Process and Procedures
    - Provides ULN development rules
    - Provides FM development rules
  - TPFDD Validation Process and Procedures
  - TPFDD Scheduling, Allocation, and Manifesting Procedures

TPFDD LOI Supplements

Give more specific information than the Joint TPFDD LOI on theater or operations-specific procedures

Prepared by supported commands ICW:

- Components
- PROVORGs
- USTRANSCOM/Supporting commands
- Services and other participants as needed

Prepared for:

- Routine theater operations, if needed
- Each deliberate plan
- Each operation
- Each exercise

TPFDD Validation and Movement

- Setting C-Day
- Validation Process
- Common User Lift Scheduling Process
- Changes Request

Validation Concepts

Execution Procedure that Confirms to Supported Commander and Lift Providers that each ULN validated:

- Is free of errors that preclude movement
- PAX/Cargo data is correct
- Reflects correct movement dates
- Has Valid Geographic Codes
- Has valid UIC/unit alerted to deploy
- Is not in-place or shortfall
- Complies with policy/guidance

JET: Update Details For ULN PBFB2

File Edit Utilities Help

OPLAN: 2503D ULN: PBFB2 P N Split: Y Frag: N PIC: N Cre: 311200Z Dec 96 Upd: 010820Z Feb 01 Err: W

Unit Name: 0004 TRANSPRTATN SQ
Force Desc: TRK TRCTR 10T 6X4 (1)
POC
Nonbaseline:

UIC: FFH760 ...
ULC: ELE ...
GCC:
SRC:

Component:
ProvOrg: E ...
Service: F ...
Army COMPO:

Proj Code:
Service Rsv:
CEI: A
TUCHA Icd: N

Routing Information

	GEO	GEO Name	Mode	Src	Mns	Load Cfgn	Dsch Cstr	On Call	Priority ID	AddOn	
Origin	VKAG	SEYMOUR JOHNSON A									
POE	SBEA	NORFOLK	L	G							
POD	VKNP	SAFAQIS	S	E		A	N	N	10		
Dest	FUQN	THYNA-EL MAOU	L	D		A	N	N			Not Inplace

Lookup ...

Options

ILOCs

CDays	
RLD:	N002
ALD:	C000
EAD:	C009
LAD:	C014
RDD:	C015
CRD:	
RPD:	

CINC Candidate:
SPG Comp Ver:
SPG CINC Ver: 05Jan01
SPD Comp Ver:
CINC Validation:
TRS: B
OTH:
PIF:

SIC: N ... UTC: UFZ99 ... CCCs: 1 Level 2 Edit: UNKNOWN POL: 0 PAX: 0 Pers: 0

	Bulk	Oversize	Outsize	NAT	MMC	Vehicle	NSDAB	Container	NonCntzn	Other	Totals
STONs:	0	9.4	0	0	0			0			9.4
MTONs:	0	45	0	0	0	45	0	0	45	0	45
SQFT:						312	0	0		0	312

Apply Requery ULN Add To FM Make Standard Edit L3 Edit L4 Close

Establish C-Day

- C-Day Definition
- JOPES CAP C-Day Guidance
  - CJCS Warning Order
    - Tentative C-Day
    - May request Supported Command C-Day recommendation
  - CJCS Planning Order
    - Tentative C-Day
    - May set 72-hour validation rule
  - Alert Order
    - Firm C-Day

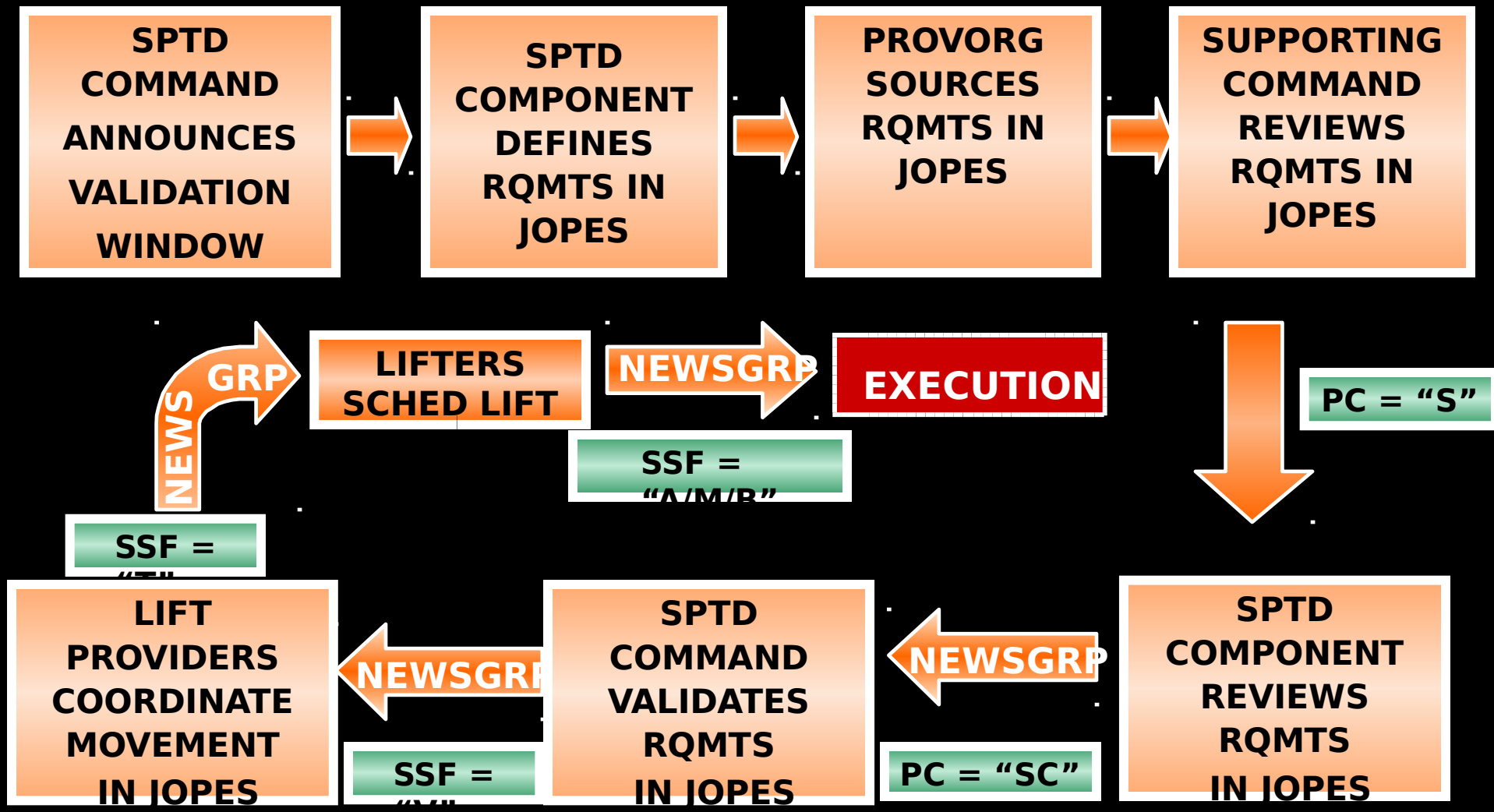
Any SECDEF approved CJCS order may set C-Day

TPFDD Validation Process
Four Basic Steps

1. Requirement Selection (Supported Commander)
2. Sourcing Verification (PROVORG)
3. Supported Command Component Verification
4. Supported Commander Validation

VALIDATION PROCESS

FOR UNITS AUTHORIZED BY JS DEPLOYMENT ORDER



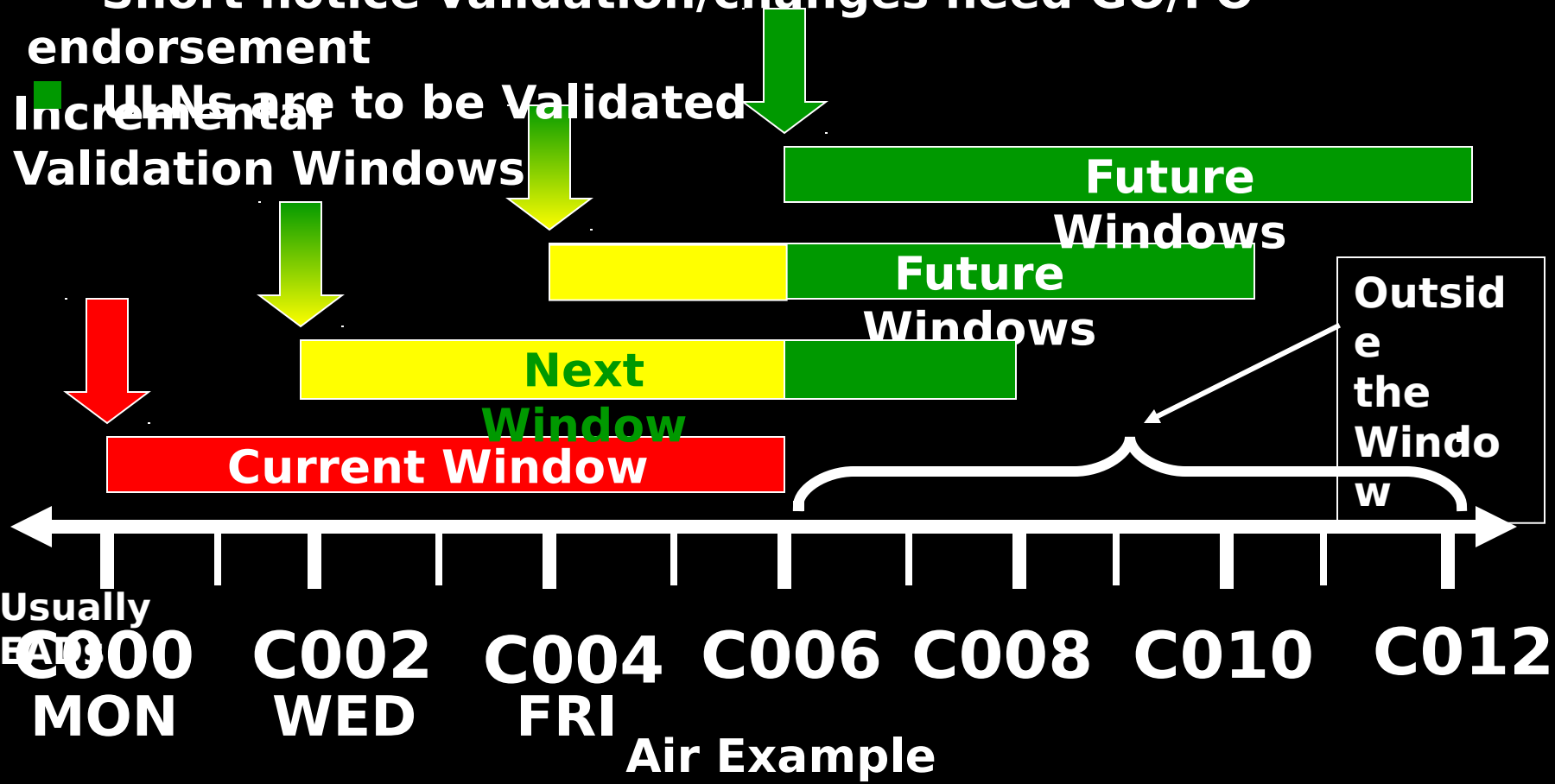
Validation Windows

	CAP	EXERCISE
Airlift	Normally 7 Days C + 6	Normally T-50 Days
Sealift	Normally 45 Days C + 44	Normally T-60 Days
Land/ Other Surfaces	Normally 7 Days C + 6	Normally T-50 Days
Force Rotation	45 Days Sea C + 44 21 Days Air C + 20	T-Day = 1st day of Month in which Deployment/ Redeployment begins
Exercise		

Validation Windows

Lead Time Required to Manage the Force Fl

- ULNs are being Scheduled/Allocated/Manifested/ Executed
- Short notice validation/changes need GO/FO endorsement
- ULNs are to be Validated



Air Example

Common User Lift Scheduling Process

Supported Command Validates Movement Requirements (REQs)

USTRANSCOM Pulls/ Reviews Validated Movements REQs

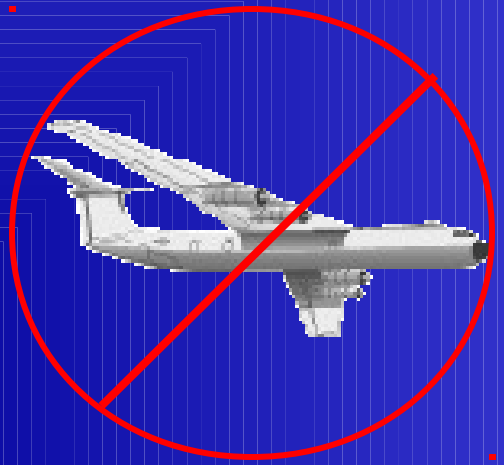
USTRANSCOM Passes REQs to TCCs

AMC uses AMC Automated Tools to Schedule Lift & Allocate REQs

SDDC Schedules Lift & Allocates REQs

MSC Schedules Lift (SDDC Allocates)

Additional Planning Guidelines



- AIRLIFT GUIDELINES
  - ULN with less than 15 STONs or 100 PAX:
    - AMC WILL NOT FLY
    - Must aggregate by POEs / PODs
- SURFACE GUIDELINES
  - Truck Movement planning in miles/day:
    - 500-600 for non-convoy; 400 convoys
    - See TPFDD supplemental guidance
  - Rail Movement planning in miles/day:
    - 528-dedicated train; 312-mixed train (commercial/military)
- SEALIFT GUIDELINES
  - Transit times; on-load; off-load
  - Airlift and Port Synchronization

USTRANSCOM Supplemental TPFDD Guidelines, 27 April 2001

USTRANSCOM Mission

"...PROVIDE AIR, LAND, AND SEA TRANSPORTATION FOR THE DEPARTMENT OF DEFENSE IN PEACE AND WAR"

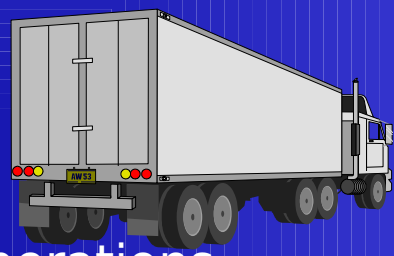
USTRANSCOM Component Commands (TCCs)

MILITARY SEALIFT COMMAND

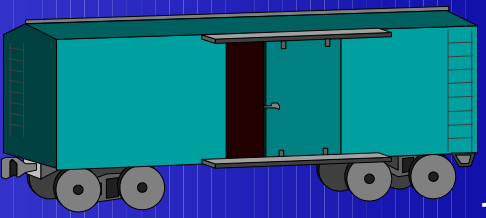
MILITARY SURFACE DEPLOYMENT & DISTRIBUTION

AIR MOBILITY COMMAND

Military Surface Deployment & Distribution Cmd (SDDC)



- Operations Center at Ft Eustis, VA
- Key Responsibilities:
  - Single DoD Manager for Worldwide Port Operations
    - Prepares ports for ships and cargo
    - Manages Common-User Ocean Terminals, Intermodal Container Management, Traffic Management
  - Traffic Management support
  - Books DoD airlift passengers
  - Responsible for moving units from Origin to APOE in CONUS
  - Provides interface between DoD shippers and commercial carriers
  - Defense Freight Railway Interchange Fleet
  - Deployability/Transportability Engineering Analyses



Surface Fleet Force Structure

Military Surface Deployment & Distribution Command

7 CONUS Terminals

1,796 Railcars

11,457 Containers

Other Commercial Support

Port Authorities (17 Strategic Ports)

Rail

Trucking

Containers

Ports for National Defense

Contingency Response Program (CORE)

- Voluntary program helps SDDC expand domestic transportation infrastructure during contingencies to:
  - Expand port operations
  - Enhance port security and decontamination capabilities
  - Gives the DoD priority for surface lift within the CONUS
  - Assists with hazardous materiel transport
  - Provides additional sources for leasing heavy equipment transports and other materiel handling equipment

USTRANSCOM Component Commands (TCCs)

MILITARY SEALIFT COMMAND

MILITARY TRAFFIC MANAGEMENT COMMAND

AIR MOBILITY COMMAND

Military Sealift Command (MSC)

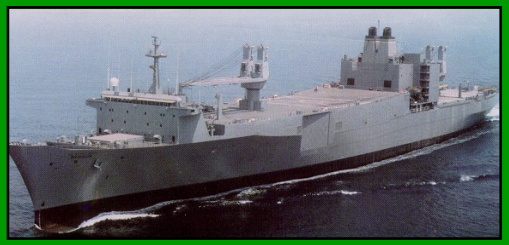
- KEY RESPONSIBILITIES:
  - Command and Control of all Strategic Sealift Forces
  - Manage and Activate Fast Sealift Ships (FSS)
  - Manage Ready Reserve Force, Upon Activation
  - Contract for Commercial / Intermodal Capacities
  - Manage Afloat Prepositioned and Maritime Pre Forces Vessels
  - Logistics Over The Shore (LOTS)

- ADVANTAGES:
  - COST = 10% of Airlift
  - 1 Ship = 130 C-5s

- COMMERCIAL LIFT:
  - Containers

Strategic Sealift Forces

Military Sealift Command (MSC)



8 Fast Sealift Ships (FSS)

11 LMSR *

***Final delivery in FY03 - 1st LMSR entered the surge fleet in May 98**

Maritime Administration (MARAD)

31 RRF RO/RO

37 Other RRF

- Breakbulk (14)
- Tanker (7)
- TACS (9)
- Lash (4)
- Sea Barge (3)

Commercial

- US Flag (102)
- Effective US Control (EUSC) (170)
- Foreign Built

MSC Fast Sealift Ships (FSS)

- Fastest cargo ships in the world, travel at up to 33 knots
- Capable of sailing from the U.S. East Coast to Europe in 6 days, to the Persian Gulf via the Suez Canal in 18 days
- Combined, all eight Fast Sealift Ships can carry nearly all the equipment needed to outfit a full Army mechanized division.
- **Features**
  - **R**oll-on/roll-off and lift-on/lift-off ships
  - On-board cranes and self-contained ramps
  - Can off-load at sea or in ports where unloading equipment unavailable
  - Specially suited for heavy / bulky equipment: tanks, large wheeled vehicles, helicopters
- **All 8 ships can lift 93%** of a U.S. Army mechanized division
- 7 ships moved 13% of all cargo from U.S. to Saudi Arabia during and after the Persian Gulf War
- All based in Atlantic and Gulf of Mexico ports

Large Medium Speed Roll-On/Roll-Off (RO/RO) Ships (LMSR)

- USNS BOB HOPE (T-AKR 300)
  - Large Medium Speed RO/RO (LMSR) sealift ships
  - Design ideal for transporting helicopters, tanks and other wheeled and tracked military vehicles.
  - 390,000 square feet of cargo carrying space
  - Length = 950 feet, Beam = 105 feet, Displaces 62,000 tons

Logistics Over the Shore

- Transfer of cargo from
  - Strategic lift FSS to
  - Landing Craft, Medium 8 (LCM-8) = Mike Boat

Afloat Prepositioning Fleet

- 36 ships prepositioned in the Arabian Gulf, Mediterranean, Diego Garcia, Guam and CONUS
  - 13 ships - U.S. Marine Corps cargo (MPF ships)
  - 13 ships - U.S. Army cargo (APS-3 ships)
  - 4 ships - U.S. Air Force cargo (munitions)
    - MV Maj Bernard F. Fisher
    - MV A1c William H. Pitsenbarger
    - MV Merlin
    - MV Capt Steven L. Bennett
  - 3 ships - Defense Logistics Agency
  - 2 ships - Navy Fleet Hospital/MCDS
  - 2 T-AVBs (aviation support) in CONUS

USTRANSCOM Component Commands (TCCs)

MILITARY SEALIFT COMMAND

MILITARY SURFACE DEPLOYMENT & DISTRIBUTION COMMAND

AIR MOBILITY COMMAND

Air Mobility Command (AMC)

- Mission: Rapid, global mobility and sustainment for America's armed forces
- Provide strategic airlift for global mobility
- http://public/scott.af.mil/hqamc/
- AMC/CC is also TRANSCOM
- Scott AFB, IL

AMC Missions

- Worldwide Airlift of Cargo and Passengers
- Airdrop Operations
- Aeromedical Evacuation
- Special Operations
- Air Refueling
- Operational Support Airlift

- Presidential Support
- Humanitarian

AMC

- Tanker Airlift Control Center (TACC)
- Air Terminal Operations
- Airlift

AMC Tanker Airlift Control Center (TACC)

- Directs the global employment of air mobility forces in support of US goals and objectives
- Nerve center of AMC
- Manages entire life cycle of air mobility requirements
- Manages all airlift, air refueling, aeromedical, and operational support airlift missions

AMC Air Terminal Operations

- Air Terminal Functions
  - Command and Control
  - Aerial Port
    - Cargo Terminals
    - Passenger Terminals
    - Air Terminal Operations Center (ATOC)
  - Maintenance
- Major CONUS Ports
  - Hubs for cargo / pax throughput
  - Comprehensive airlift maintenance support
- En Route Structure
  - Air Mobility Squadrons
  - Provide some or all of the following functions according to scheduled channel airlift

AMC Air Terminal Operations
Global Reach Laydown

- AMC strategy to meet temporary En Route requirements above baseline capabilities:
  - Expand a fixed En Route
  - Establish an En Route where needed
- TALCE
  - Managed by an officer, TALCE CC
  - Provide temporary
    - Terminal Operations Center
    - Passenger & Cargo Terminal Ops
    - Limited Maintenance Support
  - Self-sufficient
  - Report directly to TACC
- Mission Support Team
  - Managed by an enlisted MST Team Chief
  - Provide some but not all functions of a TALCE, temporarily

AMC Types of Airlift

- Military Airlift
- Contract Airlift
- Civil Reserve Air Fleet

AMC Military Airlift Assets

C-130

KC-135

C-

- 597 Active Duty Aircraft
  - 252 Airlift
  - 257 Refueling / Airlift
  - 88 Other--C-9, C-20, C-21, etc.
- Guard / Reserve Aircraft
  - 106 Airlift
  - 296 Refueling / Airlift
- Advantages
  - Specialized
  - Heavy duty

KC-

C-17

C-

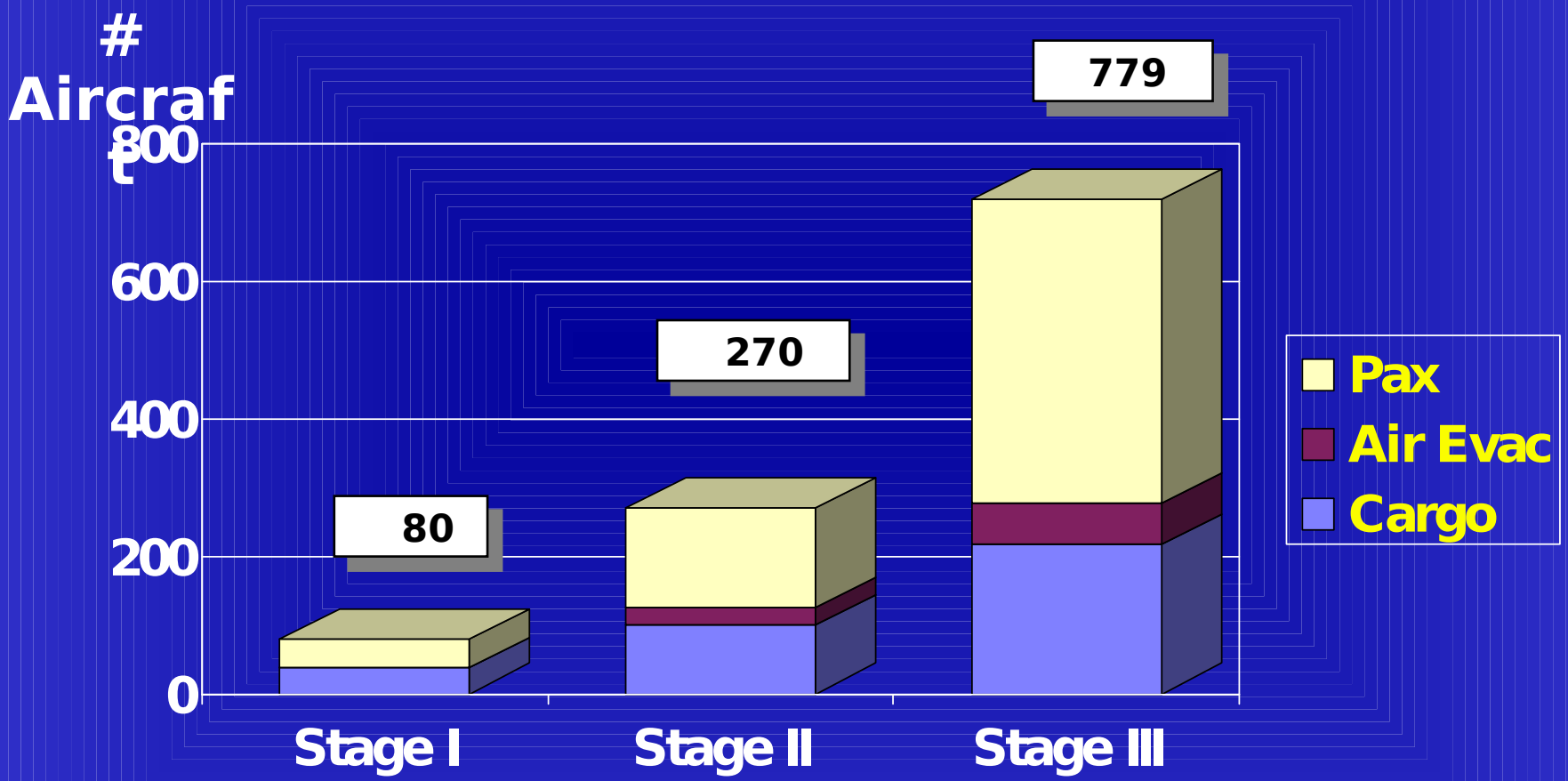
AMC Contract Airlift

- May be Channel, Exercise, Contingency
- Passenger & Cargo transportation
- Advantages
  - Less wear and tear on Mil Air
  - Great for moving people
- Challenges
  - Wide body loaders
  - Coordination
  - Military cargo

Civil Reserve Air Fleet (CRAF)

- Augments military with civil air during increased airlift activity
- Voluntary, contractual program
- CRAF members get AMC peacetime airlift business.
- Established in 1951, first used in DESERT SHIELD/DESERT STORM
- 3 Stages

Civil Reserve Air Fleet



Stage I
Minor regional crisis

Stage II
Major theater conflict

Stage III
- National mobilization
- SECDEF Approval

AMC Missions

- Channel Lift
- Contingency Operation Lift - TPFDD, SAAM
- "Logistics Movements"

USTRANSCOM Typical Ops Week

Air Mobility Command

749 Missions
1,838 Sorties
60 Countries

Military Sealift Command

23 Ships Underway
20 Ports Visited
18 Countries

Military Traffic Management Command

350 Major Shipments
25 Ports Managed
18 Countries

Transportation Planning for Phases of Deployment Operations

Transportation and Deployment Operations Phases

Deployment Phase:

- Move forces to theater of operations
- TRANSCOM:
  - Intertheater lift / strategic lift moves forces to theater
- Supported Commander:
  - Intratheater lift / tactical lift moves forces within theater
- User load teams
- Dates:
  - Required Delivery Date (RDD) = NLT date when the unit, UTC, personnel, or materiel must be in place
  - Date Required Inplace (DRI) = personnel terminology; NLT date when personnel must be in place

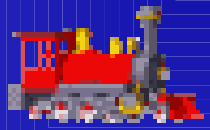
Transportation and Deployment Operations Phases

Employment Phase:

- Resupply - strategic lift
- Intratheater airlift
- Intratheater surface (truck or boat) lift
- Other service capabilities

Redeployment Phase:

- Return forces from theater of operations
- Flow works generally in reverse of deployment
- User load teams



ORIGIN / DESTIN

APOE /

APOD /

SPOE

SPOD

Other Transportation Planning Considerations

- Commercial Airlift
- Wide body loaders, MHE
- Hazardous Cargo
- Airfield Particulars
- Customs
- Don't forget the special requirements:
  - Passports
  - Visas
  - Country Clearances
  - Hazardous Materials Diplomatic Clearances
  - Weapons lists and serial numbers
- Prior Permission Req'd (PPR), DIP Clearances
- Communication
- Port Saturation / MOG

Summary

- Transportation Planning Objectives:
  - Project combat capability
  - Optimize usage of transportation resources
  - Consider various modes and sources of lift
  - Develop transportationally feasible TPFDDs during deliberate planning for modification/usage during crisis
- MOG (Maximum on Ground)
  - Parking
  - Working

Summary

- Supported Commander Planning Responsibilities
  - Develop a transportationally feasible TPFDD, including TPFDD Letter of Instruction
  - Coordinate with TRANSCOM for TPFDD:
    - Prioritization of forces
    - Required Delivery Dates
    - Mode and source of lift
    - Movement Flow
    - Shortfalls / LIMFACs

Summary

- Joint Flow and Analysis System for Transportation (JFAST)
  - TPFDD transportation analysis
  - Aids COA analysis / selection

Summary

USTRANSCOM Component Commands (TCCs)

MILITARY SEALIFT COMMAND

MILITARY SURFACE DEPLOYMENT & DISTRIBUTION

AIR MOBILITY COMMAND

Transportation Planning Specs and Timeframes

The US standard railroad gauge (distance between the rails) is 4 feet, 8.5 inches.

Q: Why was that particular gauge used?

- That's the way they built them in England, and English expatriates built the US Railroads.

Q: Why did the English build them like that?

- Because the first rail lines were built by the same people who built the pre-railroad tramways, and that's the gauge they used.

Q: Why did "they" use that gauge then?

- Because the people who built the tramways used the same jigs and tools that they used for building wagons, which used that wheel spacing.

Transportation Planning Specs and Timeframes

Q: Why did the wagons have that particular odd wheel spacing?

- If they tried to use any other spacing, the wagon wheels would break on some of the old, long distance roads in England, because that's the spacing of the wheel ruts.

Q: So who built those old rutted roads?

- Imperial Rome built the first long distance roads in Europe (and England) for their legions. The roads have been used ever since.

Q: What caused ruts in the roads?

- Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Since the chariots were made for Imperial Rome, they were all alike in the matter of wheel spacing.

Transportation Planning Specs and Timeframes

The United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot. And bureaucracies live forever.

So the next time you are handed a specification and wonder which horse's behind came up with it, you may be exactly right, because the Imperial Roman war chariots were made just wide enough to accommodate the back ends of two war horses.

The Rest of the Story ...

- When you see a Space Shuttle sitting on its launch pad, there are two big booster rockets attached to the sides of the main fuel tank. These are solid rocket boosters, or SRBs.
- Thiokol makes the SRBs at their factory at Utah. The engineers who designed the SRBs would have preferred to make them a bit fatter, but the SRBs had to be shipped by train from the factory to the launch site.
- The railroad line from the factory happens to run through a tunnel in the mountains. The SRBs had to fit through that tunnel. The tunnel is slightly wider than the train, about as wide as two horses' behinds.
- Result: A major space shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by ..... the width of a horse's behind.

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